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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,655	12/30/2003	Byong Kee Kim	1315-051	1581
22429	7590	03/07/2006	EXAMINER	
LOWE HAUPTMAN GILMAN AND BERNER, LLP			MAI, NGOCLAN THI	
1700 DIAGONAL ROAD			ART UNIT	PAPER NUMBER
SUITE 300 /310				
ALEXANDRIA, VA 22314			1742	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/747,655	KIM ET AL.	
	Examiner Ngoclan T. Mai	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 01 December 2005.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-4,6,7 and 9-17 is/are pending in the application.

4a) Of the above claim(s) 15-17 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-4,6,7 and 9-14 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

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**DETAILED ACTION**

1. Newly submitted claims 15-17 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

- I. Claims 1-4, 6-7, 9-14, drawn to method of making, classified in class 75, subclass 351.
- II. Claims 15-17, drawn to TaC-transition metal based complex powder, classified in class 75, subclass 255.

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product of claims 15-17 can be made by high energy ball milling a mixture of precursor powders and carbon source, following by annealing the milled powder to form cemented carbide powder.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 15-17 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is amended to recite "nana-sized carbon particle". It is not clear what is the size of a "nana-sized" powder.

***Response to Arguments***

3. Applicant's arguments filed 12/21/05 have been fully considered but they are not persuasive. Applicant's arguments, see page 6-7 and last paragraph of page 8, filed 9/7/05, with respect to the rejection of claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (2002/0043130A) in view of Hardy et al (U.S. 3,488,291) and Shaw et al. (U.S. 6,214,309) by have been fully considered and are persuasive. The rejection of pending claims 1-4, 6-7 has been withdrawn.
4. Applicant's arguments with regarding to claims 1-8 (now claims 1-4, 6, 7, 9-14) stand provisionally rejected under the judicially create doctrine of obvious-type double patenting as being unpatentable over claims 1-9 of copending application Serial No. 10/747,657 have been fully considered but they are not persuasive. The examiner disagrees with applicant's argument that titanium, unlike tantalum, is not a refractory metal and thus there is no reason to view titanium and tantalum as interchangeable in any process because the prior art is replete with examples that titanium is a refractory metal, see U.S. 3,723,601, claim 1 and U.S. 4,124,665, col. 10, l. 62 to col. 11, l. 2. Furthermore it is also well known in the art and as evident by the teaching of Hardy that the process of producing cemented metal carbide can be applied to any metals listed in col. 2, l. 41-51, which includes titanium can tantalum.
5. The provisionally rejection of now claims 1-4, 6, 7, 9-14 under judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/747,657 still stand.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

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action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ngoclan T. Mai  
Primary Examiner  
Art Unit 1742

n.m.